

Patent Claims

1. Method for producing a fibrous material for the manufacturing of preformed  
5 parts, in which a binder is added to the fibrous material and it is pressed into a  
preformed part upon application of heat, characterised in that a portion of particles  
of plastics and/or fibres from plastics is admixed to a particle or fibre mass of a first  
group of particles or fibres, the particle size of said particles from plastics and/or  
10 fibres from plastics approximately corresponding to the particle size of the particles  
or fibres of the first group, wherein the particles from plastics and/or fibres from  
plastics are obtained by crushing and/or defibrating agglomerates of pure or mixed  
plastics in a disc refiner, and that if necessary water is fed into the disc refiner  
during the crushing process.
- 15 2. Method according to claim 1, characterised in that only pure plastics is defibrated  
in the disc refiner.
3. Method according to claim 1 or 2, characterised in that the particles and/or fibres  
of the plastics are dried after being crushed.
- 20 4. Method according to any one of claims 1 to 3, characterised in that the first group  
of fibres is obtained by defibrating flax, hemp, glass or carbonized material.
5. Method according to any one of claims 1 to 3, characterised in that the first group  
25 of particles or fibres is obtained by crushing or defibration of wood.
6. Method according to claim 1 and 5, characterised in that agglomerate of mixed  
and/or pure plastics, together with wood particles, is crushed to particles and/or  
fibres in a disc refiner.

7. Method according to any one of claims 1 to 6, characterised in that good mixing of particles from plastics and/or wood and/or fibres from plastics and wood is attained in the disc refiner.
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8. Method according to any one of claims 1 to 7, characterised in that the temperature of the supplied water is at most 50°C.
9. Method according to any one of claims 1 to 7, characterised in that the water is
- 10 supplied to the refiner via humid wood particles.
10. Method according to any one of claims 1 to 7, characterised in that the water is supplied to the refiner in a gaseous state.
- 15 11. Method according to any one of claims 1 to 9, characterised in that the maximum size of the plastics agglomerate is 40 mm.
12. Method according to any one of claims 1 to 11, characterised in that the material which is to be crushed and/or defibrated is fed to the refiner via a stuffing screw.
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13. Method according to any one of claims 1 to 12, characterised in that at least the agglomerate fraction is subjected to a boiling process before it is crushed in the refiner, and adhering contaminations are removed.
- 25 14. Method according to any one of claims 1 to 13, characterised in that the boiling process is performed at temperatures of from 100°C to 180°C and under an excess pressure of from 1 to 4 bars.

15. Method according to claim 13 or 14, characterised in that the boiling time is from 3 to 10 minutes.
- 5 16. Method according to any one of claims 1 to 15, characterised in that the particles and/or fibres are dried to a desired final humidity after crushing in a hot steam flow and that the hot steam flow is fed back in a closed circuit into the material which is to be dried.
- 10 17. Method according to claim 16, characterised in that the hot steam flow is warmed up before it is guided back into the material that is to be dried.
- 15 18. Method according to any one of claims 4 to 15, characterised in that the mixed plastics and/or pure plastics agglomerate is crushed to particles and/or fibres in a disc refiner together with wood particles, and the crushed material is dried with hot steam in a flow circuit.
- 20 19. Method according to any one of claims 1 to 18, characterised in that the material which is to be crushed and/or defibrated is fed to the refiner via a stuffing screw.
- 20 20. The application of the method according to any one of claims 1 to 19 to the manufacture of wood material parts, in particular of wood fibre boards, by partly substituting the wood chips or wood fibres by particles or fibres from plastics, which stem from recycled plastics.
- 25 21. Application of the method according to any one of claims 1 to 19 on the manufacture of insulating material boards with a wood fibre content.